Climate benefits of NAJD





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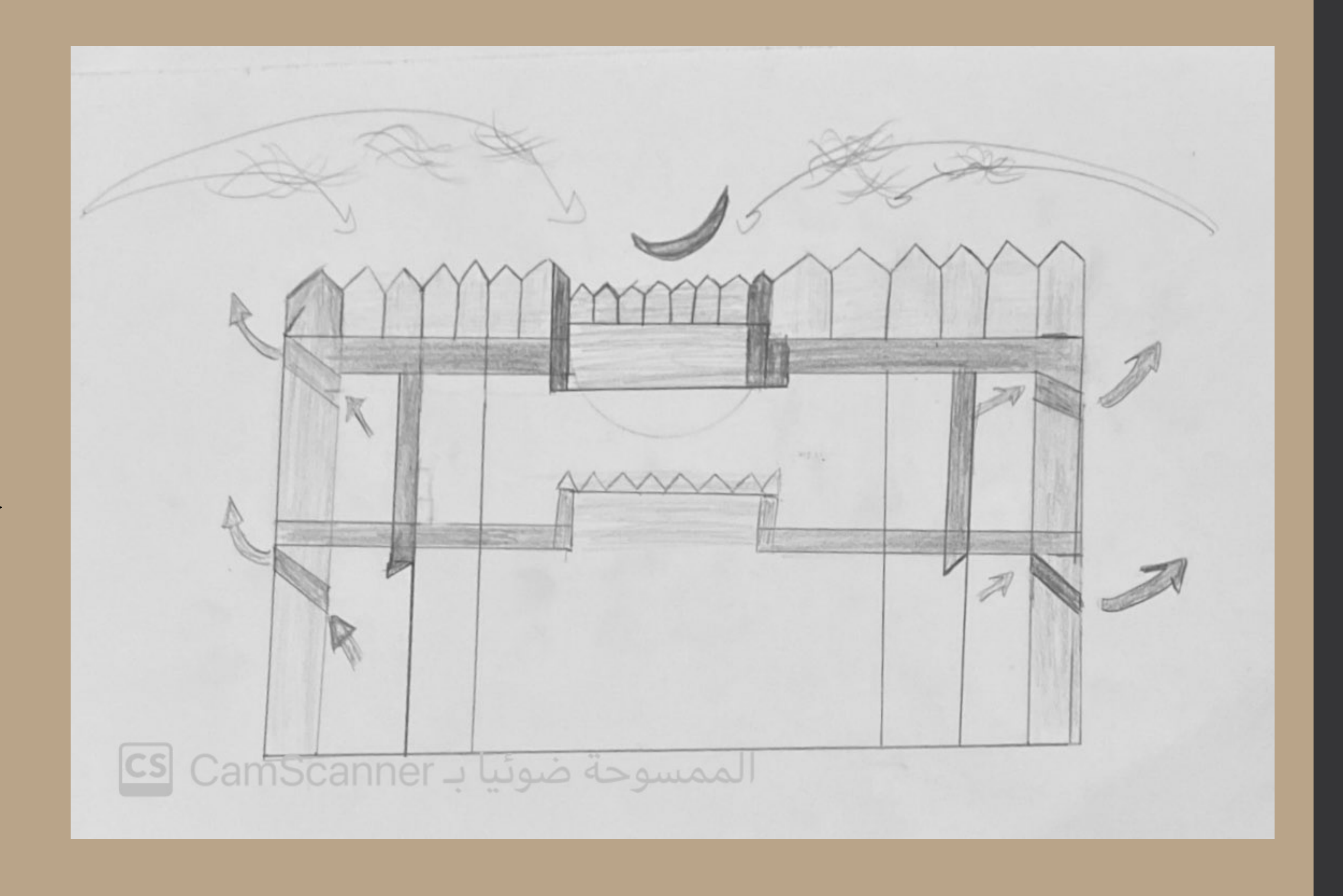


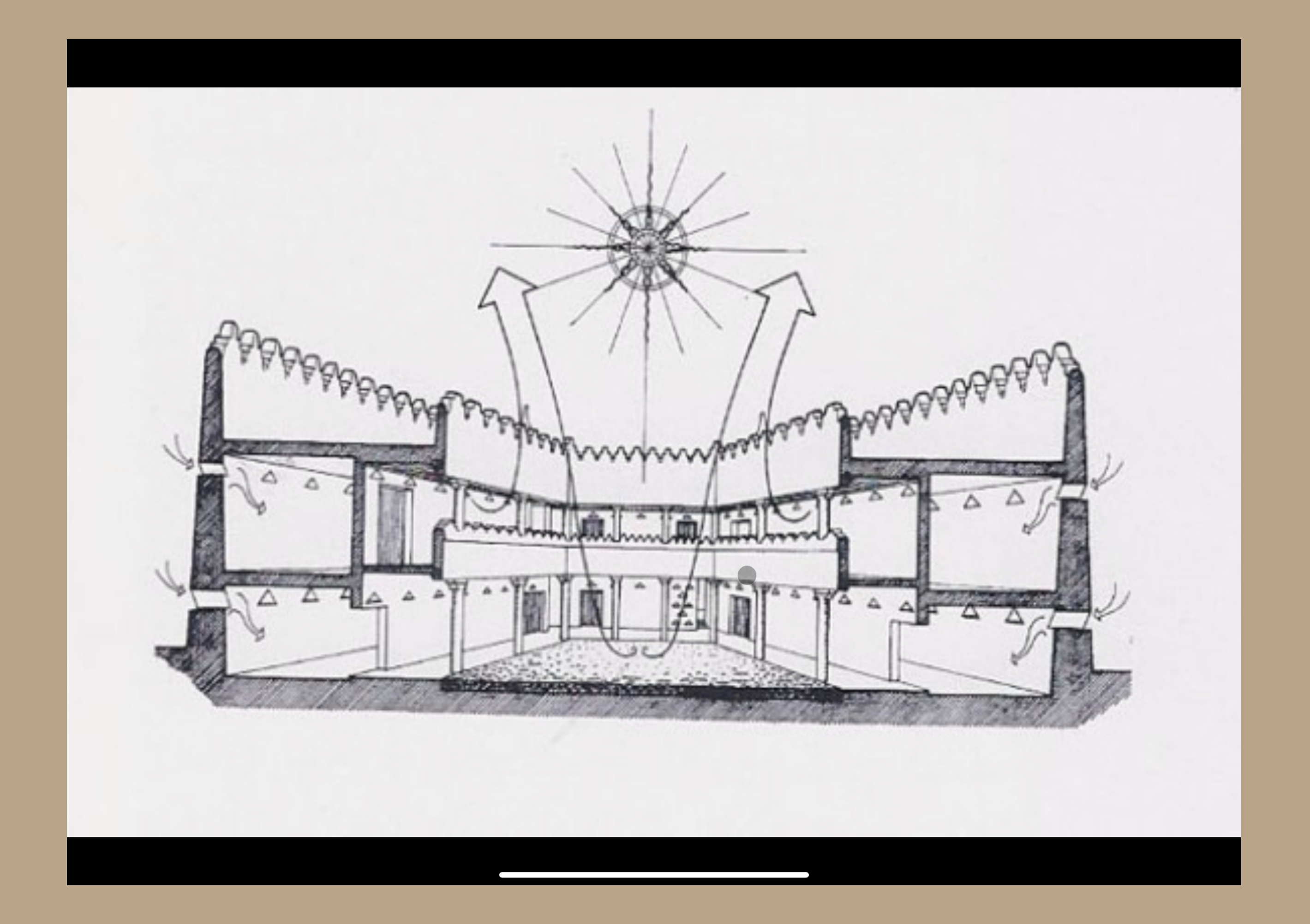
Good ventilation is one of the characteristics of a good home. • Ventilation of the dwelling is one of the important elements that contribute to maintaining the quality of the air inside the dwelling, and then to the comfort and health of its residents. Good ventilation helps to adjust the temperature during hot times. Ventilation is controlled by windows and doors, according to their number, area, and the way they are distributed in the dwelling, because a house that contains many windows has better ventilation, and the location and area of the windows increases the quality of ventilation by allowing the entry of larger quantities of air, in addition to facing the windows facilitating the movement of air inside The dwelling. Accordingly, knowing the most frequent wind directions in the area enables the dwelling designer to determine the number of windows, their breadth, and their directions.

Among the factors that affect the ventilation of the dwelling site, and it is usually preferred that the dwelling be in an open area that allows the movement of winds to reach the dwelling, and for this it is necessary to stay away from buildings or high barriers that prevent or reduce air access to the dwelling.

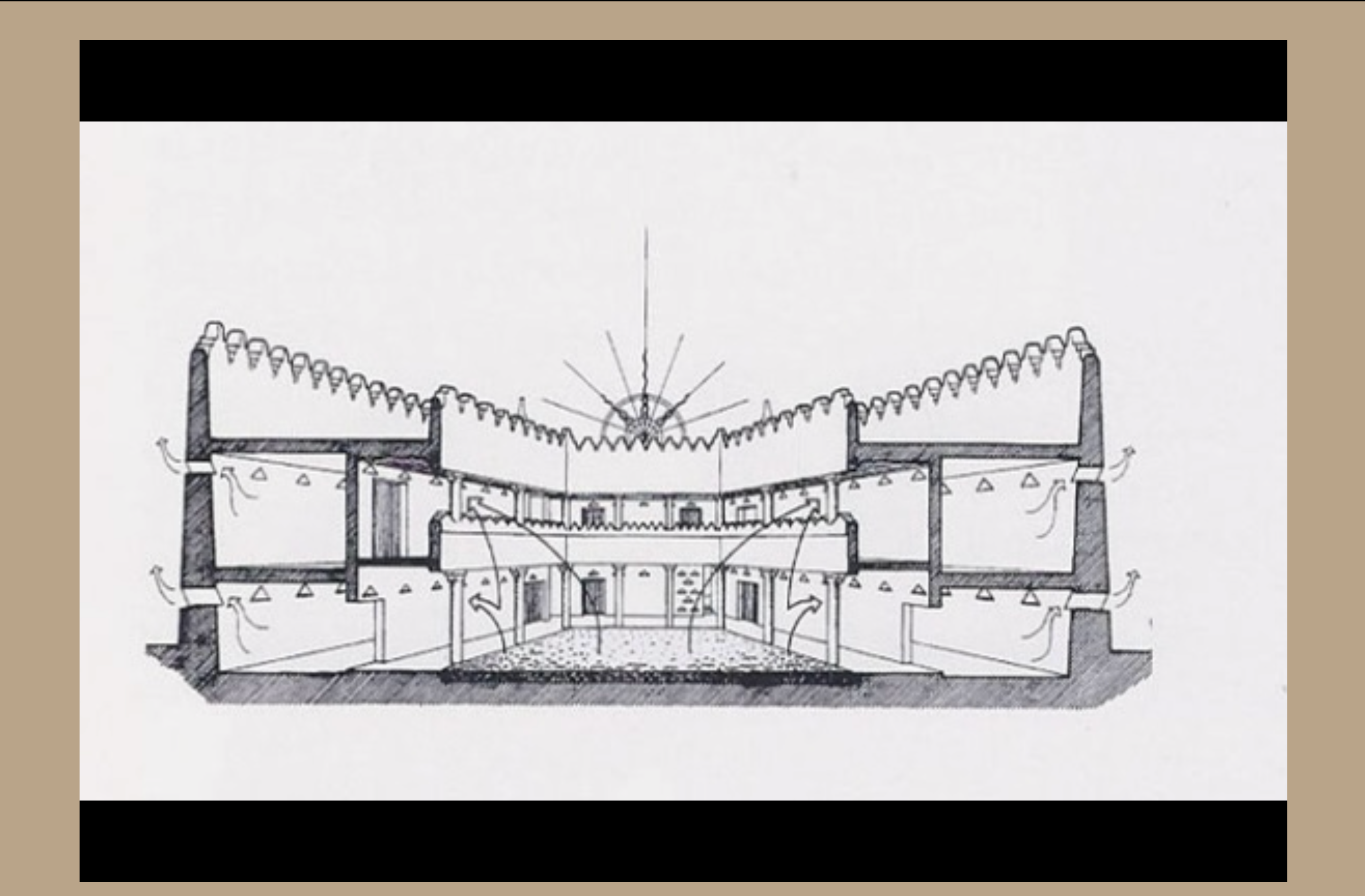
In the past, they lived in mud houses without electricity, and it was necessary to make a ventilation system for the house by making some ventilation holes during designing and building the house

During the night, the courtyard and roof act as a cool air sink





But, during the day, the sun heats the courtyard. Warm air rises creating a chimney effect and pulls breeze through the rooms.



- **In the evening, the courtyard and buildings retain heat then give it off as the night air cools.**

Besides surrounding the house with walls, central courtyards are a key feature of these mud houses. The wind passing over creates a low-pressure zone in the courtyard. This sucks in eddies but the low-pressure is counteracted by well-placed apertures in the rooms into the courtyard.

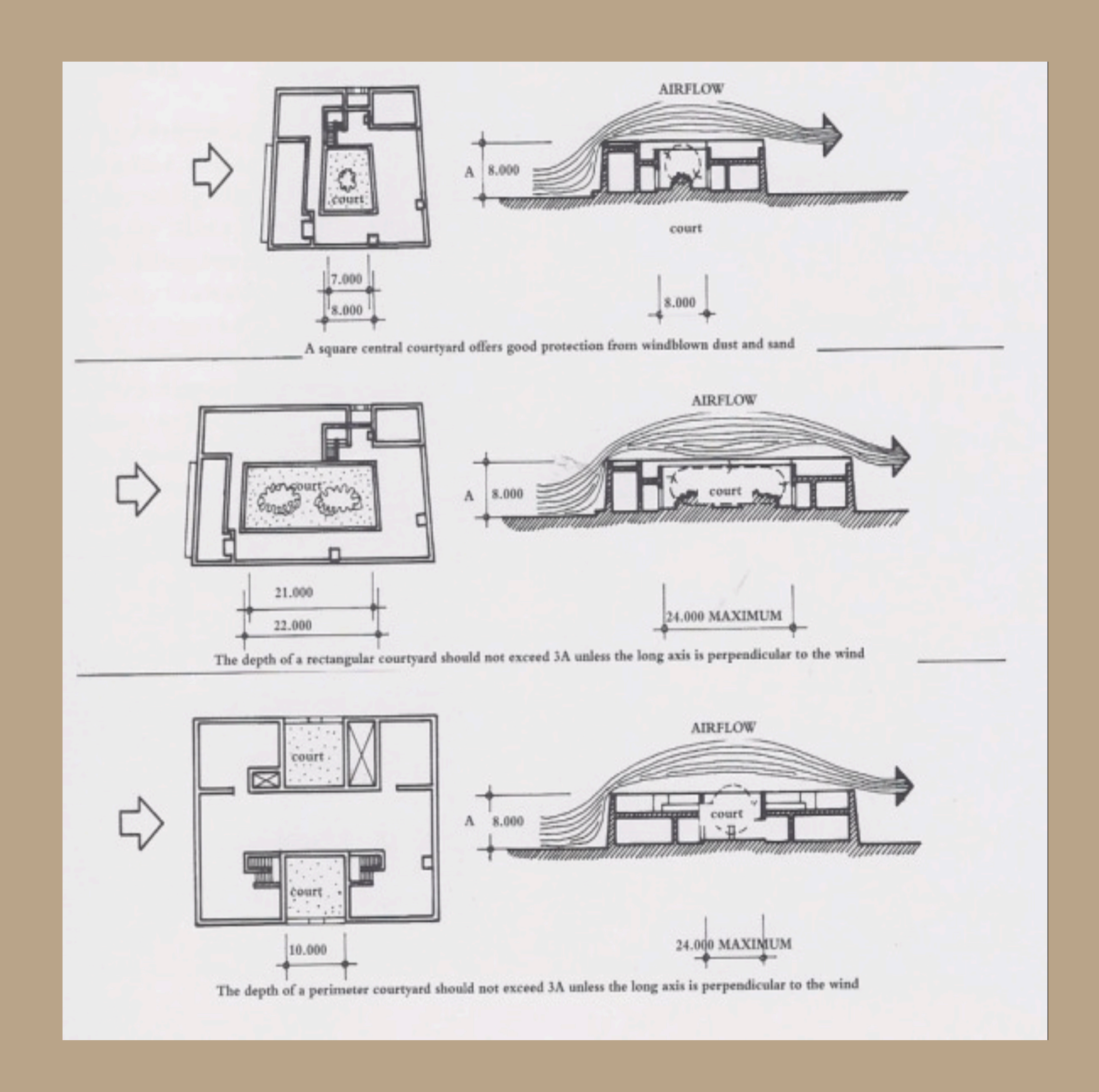
The mud building is suitable for desert areas and continental climate, where the sun's heat and the lack of rain in the mud with its coldness in the summer and its warmth in the winter, and the architecture in Najd has two main components, the mud and the al-Athal tree, and the mud is obtained from the edges of the valley.





- In the past, humans used trees and palms to get rid of dust and reduce wind strength

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In conclusion, thank you for listening

Abdallah abdulmoein Alagha